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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,089	06/22/2000	SIMON DANIEL BRUECKHEIMER	476-1900	7644

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EXAMINER	
HOANG, THAI D	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/509,089	BRUECKHEIMER ET AL.	
	Examiner	Art Unit	
	Thai D Hoang	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-99* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-16,20-37,39-48,52-69,71-75,78-82,84-88,91-95 and 97-99* is/are rejected.

7)☒ Claim(s) *17-19,38,49-51,70,76,77,83,89,90 and 96* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-16, 20-37, 39-48, 52-69, 71-75, 78-82, 84-88, 91-95 and 97-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons et al, US Patent No. 6,075,798 in view of Nagami et al., US Patent No. 5,822,319, and further in view of Vogel, US Patent No. 6,075,788, hereafter referred to as Lyons, Nagami and Vogel respectively.

Regarding claims 12-16, 20-22, 44-48, 52-54, 74-75, 78, 87-88 and 91, Lyons discloses a method and system called extended header for use in ATM adaptation layer (AAL) type 2 packets. Lyons discloses that the system comprises the steps of: encapsulating datagram into payloads of asynchronous mini-cells (fig. 1), wherein each of the asynchronous mini-cells having header 60 including channel identifier (CID) (encapsulating datagram into payloads of asynchronous transport network mini-cells, each mini-cell having a header in addition to a payload, the header including a channel identifier (CID) field); and assembling the mini-cells into ATM cells and transporting the ATM cells to a destination through an ATM network. Lyons does not teach the system encapsulates multi-protocol diagrams and associating a point-to-point protocol identifier of the datagram being encapsulated therein with the CID field of each of the mini-cells.

However, Vogel discloses Sonet physical layer device having ATM and PPP interfaces, which comprises PPP processing block (fig. 3, element 44). The device is programmable to allow multiple standard and non-standard data transmission modes, including: a) transmitting ATM cells in SONET payloads or PPP frames in ATM cells in SONET payloads; b) PPP frames from a UTOPIA interface in SONET payloads; and c) PPP frames directly in SONET payloads (figs. 2-4, col. 2, line 51 – col. 3, line 50). Nagami discloses a system called router device and datagram transfer method for data communication network system. Nagami teaches that the system comprises a router device, which comprises a table means for registering a correspondence between a virtual connection identifier and protocol type information indicating a type and/or a version of a protocol; connection identifier analysis means for determining a protocol type information for a datagram entered from one virtual connection, by referring to the table means according to a virtual connection identifier of said one virtual connection (col. 4, lines 56-62; col. 7, lines 16-22; col. 8, lines 40-47; col. 10, lines 19-26). It indicates that the channel identifier associates with protocol type of the datagram for routing datagram to/from ATM network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the method disclosed by Nagami and Vogel into Lyons' system for economic reason since it could be adapted with plurality of protocol diagrams used in networks.

Regarding claims 23, 55, 79 and 92, Lyons discloses that the mini-cells are AAL2 mini-cell for mapping services offered by the ATM network to the services required by applications; figures 1, 4 and 9; abstract; col. 2, line 49-col. 4, line 5 (the asynchronous

transport network is an asynchronous transport mode (ATM) network and the mini-cells are ATM adaptation layer 2 (AAL2) mini-cells.)

Regarding claims 24-27, 30, 56-59 and 62, Lyons teaches that each of the AAL-2 mini-cells comprises a channel identifier. It indicates that Lyons' system implements the step of mapping at least one or several sessions to a channel, which is indicated in the CID field; fig. 1; col. 3, line 54 –col. 4, line 5 (including the step of mapping a PPP session to a single AAL2 channel.)

Regarding claims 28-29 and 60-61, since the system disclose by Lyons does not encapsulate multi-protocol diagrams; therefore, it does not include the step of mapping several protocols from different sessions to a same channel. However, Nagami discloses that the system could be able to map multi-protocol diagrams from different session to an AAL channel according to the table (col. 4, lines 56-62; col. 7, lines 16-22; col. 8, lines 40-47; col. 10, lines 19-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the method disclosed by Nagami into Lyons' system for advantages as cited above with respect to claim 12.

Regarding claims 32, 64, 80 and 93, Lyons does not disclose the step of scheduling transport of ATM mini-cells according to the type of PPP datagrams encapsulated in the mini-cells. However, Nagami discloses that the system comprises scheduler 60s and 61s for scheduling order of the datagrams according quality of services of the datagrams analyzed by connection identifier analysis unit 13; fig 10-15; col. 3, lines 17-22; col. 8; lines 20-25; col. 21, line 22-col. 24, line 49. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to adapt the scheduler disclosed by Nagami into Lyons' system to improve the quality of service.

Regarding claims 31, 33, 63 and 65, claims 31 and 65 are combined limitations from claims 24-30 and 56-62 respectively. Therefore, claims 31, 33, 63 and 65 are rejected as cited above.

Regarding claims 34, 66, 81 and 94, Lyons discloses that the mini-cells are multiplexed into an ATM VCC; col. 3, lines 43-45; col. 4, lines 28-32 (wherein it includes the step of multiplexing mini-cells into an ATM virtual channel connection).

Regarding claims 35, 67, 82 and 95, as best understood, Lyons discloses the mini-cells comprise point-to-point traffic data, but Lyons does not teach the traffic data from a number of non-PPP sources. However, Nagami discloses that the system could be able to adapt with plurality of different protocol datagrams. It indicates that Nagami's system could be able to convey both PPP and non-PPP traffic data.

Regarding claims 36 and 68, Lyons teaches that the PPP traffic data is voice data packets; abstract; col. 1, lines 22, 42, 63; figure 4 (the PPP traffic data comprises voice traffic data).

Regarding claims 37 and 69, Lyons discloses the mini-cells are variable length cells; col. 1, lines 31-32; col. 3, lines 43-45; col. 4, lines 28-30; col. 10, lines 47-52 (the multi-protocol datagrams are encapsulated into mini-cells of variable lengths).

Regarding claims 39, 71, 84 and 97, Lyons discloses the system assembles mini-cells into ATM cells; fig. 1; col. 2, line 49-col. 3, line 53 (the step of assembling mini-cells into transport packets comprises assembling mini-cells into ATM packets.)

Regarding claims 41, 86 and 99, Lyons disclose that the mini-cells are multiplexed in time slots; fig. 5; col. 6, line 36-col. 7, line 26 (the step of assembling mini-cells into transport packets comprises assembling mini-cells directly into TDMA time slots)

Regarding claims 42 and 72, Lyons teaches that the system uses UUI (or RES) to indicate an extended header, which contains a sequence number of voice call. Therefore, the UUI implies the datagram extends into next mini-cells; abstract; col.9, lines 31-36; col. 9, line 63 –col. 10, line 2 (the method includes the step of encoding a flag in a user to user information (UUI) field of a mini-cell to indicate whether an encapsulated datagram extends into a payload of a next mini-cell.)

Regarding claims 43 and 73, Lyons does not disclose the mini-cells have an optional padding (dummy data). However, dummy cells are well-known in the art. In addition, Nagami discloses the header includes protocol identifier as recited in claim 12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the protocol identifier disclosed by Nagami into Lyons' system for advantages as cited above with respect to claim 12; and add dummy data into the mini-cells in order to maintain synchronization between AAL2 and ATM network.

Claims 40, 85 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons et al, US Patent No. 6,075,798 in view of Nagami et al., US Patent No. 5,822,319, and further in view of Lin et al., US Patent No. 5,742,599 A, hereafter referred to as Lyons, Nagami and Lin respectively.

Regarding claims 40, 85 and 98, both Lyons and Nagami do not disclose that the system assembles mini-cells directly into MPEG-TS frames. However, Lin teaches this feature in his invention; figs. 3-6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt MPEG-TS method into the system disclosed by Lyons for advantages as cited above with respect to claim 12.

Allowable Subject Matter

Claims 17-19, 38, 49-51, 70, 76-77, 83, 89-90 and 96 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 12-99 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-18:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

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SUPERVISORY PATENT EXAMINER
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